

Table E below has been worked out exactly on the basis indicated above, but it must be remembered that it is merely a forecast for the next quarter of a century.

Table E—Effect of Providing 120 Professional Engineers Annually

Year.	Number of Professional Engineers at Beginning of Year.	Deduct Wastage at 4 Per Cent.	Balance.	Add Intake.	Balance at End of Year.	Number Required to Provide 850 Per Million, &c.	Shortage.	Actual Number Per Million of Population.
1 ..	1,150	46	1,104	120	1,224	1,572	348	660
2 ..	1,224	49	1,175	120	1,295	1,593	298	690
3 ..	1,295	52	1,243	120	1,363	1,614	251	720
4 ..	1,363	55	1,308	120	1,428	1,635	207	740
5 ..	1,428	57	1,371	120	1,491	1,657	166	770
6 ..	1,491	60	1,431	120	1,551	1,678	127	790
7 ..	1,551	62	1,489	120	1,609	1,699	90	810
8 ..	1,609	64	1,545	120	1,665	1,729	55	820
9 ..	1,665	67	1,598	120	1,718	1,742	24	840
10 ..	1,718	69	1,649	120	1,769	1,763	—6	850
<i>Transfer to Goal of 900 Per Million</i>								
10 ..	1,718	69	1,649	120	1,769	1,868	99	850
11 ..	1,769	71	1,698	120	1,818	1,890	72	870
12 ..	1,818	73	1,745	120	1,865	1,913	48	880
13 ..	1,865	75	1,790	120	1,910	1,935	25	890
14 ..	1,910	76	1,834	120	1,954	1,958	4	900
15 ..	1,954	78	1,876	120	1,996	1,980	—16	910
<i>Transfer to Goal of 950 Per Million</i>								
15 ..	1,954	78	1,876	120	1,996	2,090	94	910
16 ..	1,996	80	1,916	120	2,036	2,114	78	920
17 ..	2,036	81	1,955	120	2,075	2,138	63	920
18 ..	2,075	83	1,992	120	2,112	2,162	50	930
19 ..	2,112	84	2,028	120	2,148	2,185	37	930
20 ..	2,148	86	2,062	120	2,182	2,209	27	940
21 ..	2,182	87	2,095	120	2,215	2,233	18	940
22 ..	2,215	89	2,126	120	2,246	2,257	11	950
23 ..	2,246	90	2,156	120	2,276	2,280	4	950
24 ..	2,276	91	2,185	120	2,305	2,304	—1	950
25 ..	2,305	92	2,213	120	2,333	2,328	—5	950

(ii) HOW MANY STUDENTS WILL IT BE NECESSARY TO TRAIN TO PROVIDE AN OUTPUT OF 120 PER YEAR ?

94. The answer to this question entails an investigation of the incidence of student mortality. Before considering this, however, it is necessary to divide the proposed output of 120 into graduates and non-graduates. A distribution on the following basis will be sufficiently correct :—

Graduates	..	..	..	..	75
Non-graduates	..	..	..	..	45

95. There is not enough information available to make any further estimates about the number of non-graduates—i.e., Institution membership students—beyond what has been given earlier in the chapter. However, even if no more enter the profession by this avenue it would be possible to obtain 45 a year for some years from those already at various stages of their training. The effect of the improvements which the Committee is suggesting will be to reduce the time which the average candidate for Institution membership takes. This will automatically result in a greater annual output for as long